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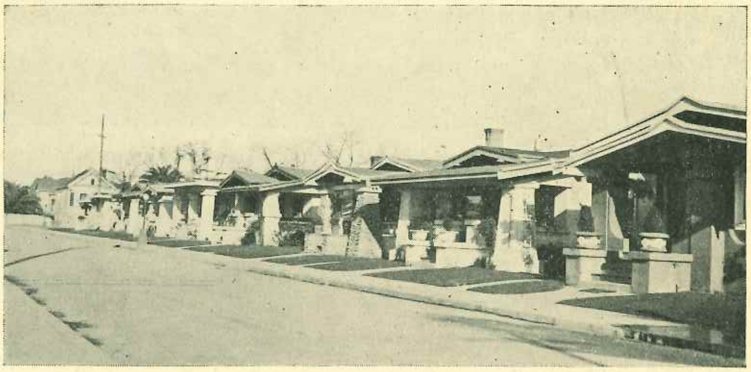
# Concrete
for
Industrial Housing



Groups of concrete bungalows can be effectively arranged by a little attention to design and location.

Concrete for Permanence

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These concrete cottages provide sanitary and healthful surroundings.

Concrete makes good economical quarters and reduces the disease, fire and slum hazard.

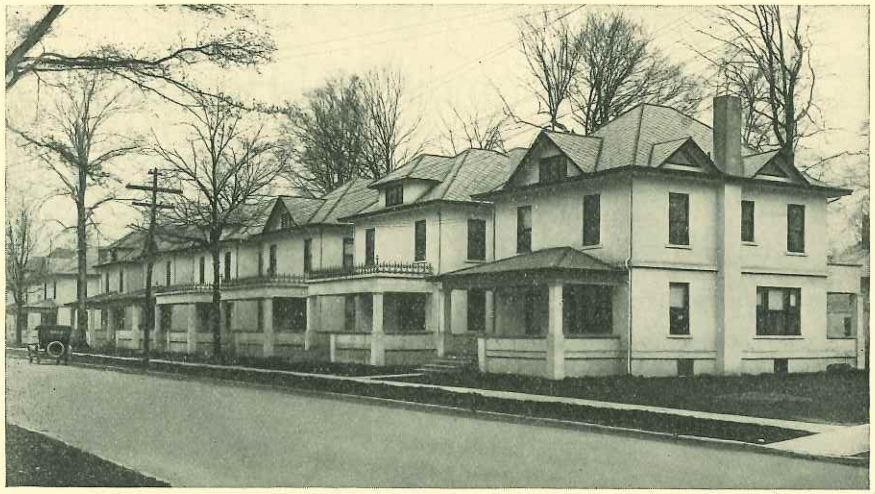
Concrete for Industrial Housing

NEED FOR BETTER WORKINGMEN'S HOMES

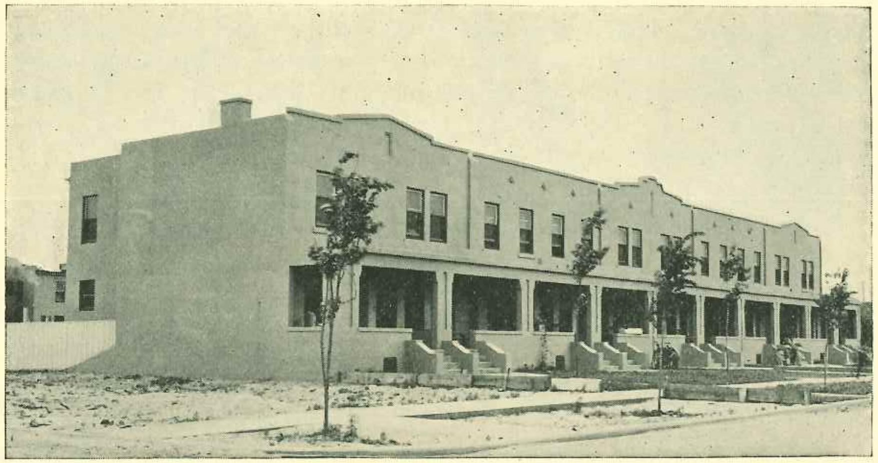
Modern industrial buildings are now planned for fire-safeness, for sanitation, for general safety and for every other end conducive to the health and welfare of the workers. The increased efficiency of workingmen resulting from a better working environment represents good profit on the investment necessary to secure it.

Although many corporations have given a great deal of attention to improving conditions under which their workers labor, few have given much attention to the conditions under which these men live. Yet it has been proved by those who have studied the problem that betterment of living conditions is vital to plant efficiency. In these days efficient workingmen are not willing to live in shanties. The lowest foreign born element soon becomes enough Americanized to demand many if not all of the home advantages and surroundings that the native born American regards as his birthright.

Better workingmen's homes are now being provided by many of our foremost industries. If they are not provided by or near the industry which employs him, the workingman will become dissatisfied and will go where congenial home surroundings and social advantages can be secured. This is especially true in these times, when speeding up of industries due to war's demands has multiplied opportunities for the workingman to choose employment to his liking. With such opportunities are wage increases that make former jobs and living conditions unattractive.



The Eli Hull Development, Newark, Ohio. These residences impress one with the security and quiet dignity which may be obtained with concrete.



Ten terrace type of concrete residences at Gary, Ind., under one roof.

CONCRETE THE SOLUTION OF INDUSTRIAL HOUSING

The problems of modern industrial plants from the building standpoint are now largely solved with reinforced concrete construction. Moderate first cost, fire-safeness, sanitation, possibility of maximum light, elimination of maintenance, are some results secured with concrete that makes the concrete factory building an attractive investment. And it passes on to the workingman benefits similar to those which accrue to the owner.

Realizing that conditions outside of the plant are just as vital to the workingman's contentment as are conditions in the plant, it is time that living conditions for the workingman were more generally improved. Welfare activities of many organizations include insurance and pension systems, profit-sharing or bonus plans, saving banks, building associations, commissaries, free legal advice—all of which are not only of benefit to the recipients but also to the concern whose foresight prompted their inauguration. Most of them develop contentment in the workingman that is identified with the home as well as with the factory.

In the average industrial town the workingman of limited means too often finds that his home is little better than a shack. The man who can pay but nominal or little rent goes unprovided for or must live in cramped, unhealthful surroundings. Such conditions are common also to congested districts in our large cities, where the problem of providing homes suitable for workingmen of moderate means is one of vital concern with respect to the health and general welfare of every citizen.

Several of our modern industrial towns are practically concrete built. The most notable of these are perhaps Donora, Mineville, Lenni and Concrete City, Nanticoke, Pa., and Morgan Park (Duluth), Minn. Here community development, which includes all town planning such as streets, alleys and homes, has been worked out largely with concrete construction.

Concrete has received attention from Industrial Developments in many cities, notable among these being Youngstown and Newark, Ohio, Charles City, Iowa, Allentown, Seigfried and Midland, Pa., Ludlow, Mass., Millington, Conn., Ada, Okla., Kansas City, Mo., Racine, Wis., and Denver, Colo., in which from ten to a hundred concrete homes have been built.

An entire section of 100 fireproof, sanitary, indestructible, all-concrete houses built to accommodate the employees of a large industrial plant in Pennsylvania.

A portion of the model city of Morgan Park (Duluth), Minnesota. Houses, walks, streets and alleys are concrete.

ADVANTAGES OF CONCRETE HOUSES

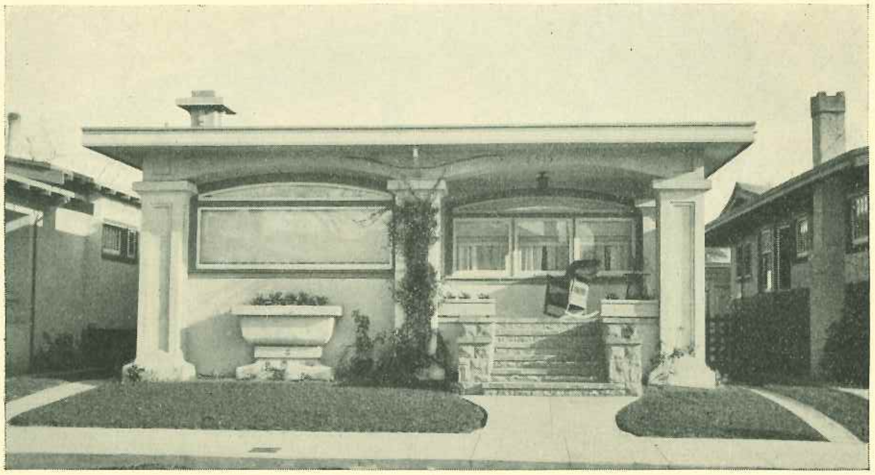
Concrete consistently used produces a fireproof structure. Fireproofness suggests permanence, and permanence brings us face to face with the fact that expensive upkeep is eliminated.

Concrete construction represents the true investment side of home building. Any investor wants to know that his fixed charges will be reasonably low. An investigation of concrete buildings at once compels preference for this material from the investment standpoint. First cost is the only cost.

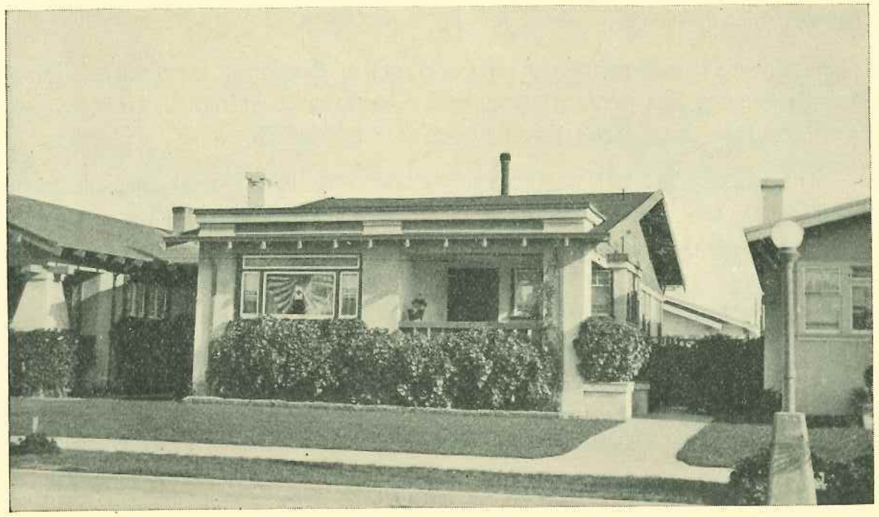
Concrete is ratproof, verminproof, sanitary. These advantages coupled with fire-safeness afford comfort and security that are not fully realized when any other building material is used.

COST

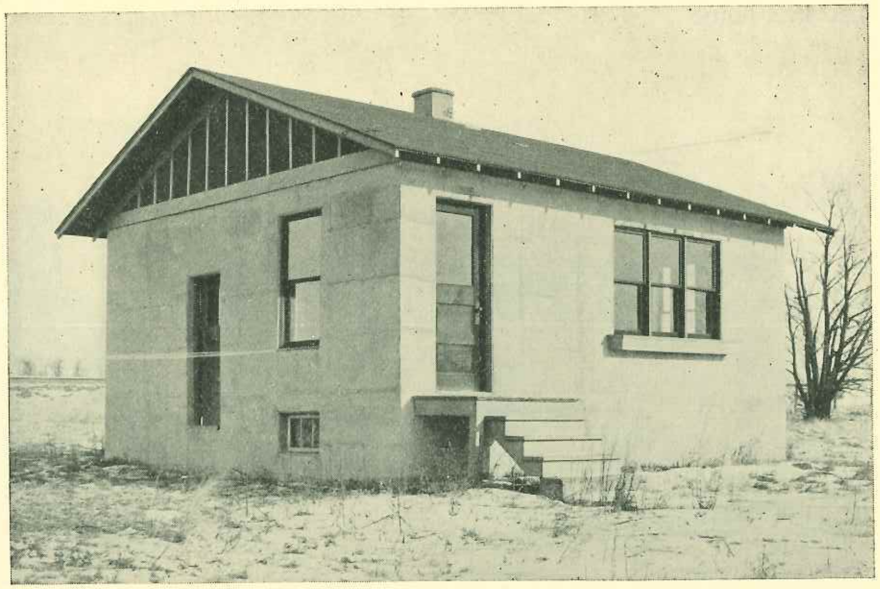
Conditions in the building trades are now such that concrete houses can compete successfully almost anywhere with any other type in first cost. Where there may be an exception to this statement, any slight increase in first cost is offset by the knowledge that a concrete house affords every security to health, life and happiness that can be had in a home.



Concrete is a favorite material for bungalows on the west coast. This one is in Alameda, California.



Pleasing designs are readily carried out in concrete. This bungalow requires no annual expenditures for painting and similar maintenance.



One of the substantial and inexpensive concrete cottages shown in the general view on page thirteen.

CONCRETE A DISTINCTIVE BUILDING MATERIAL

The idea prevails in the minds of some that concrete is a substitute building material. This is not true. It can be used wherever any other building material can be used. It has superior merits to mark it for preference:

Most of the materials required are on the ground or near by.

Common labor under competent supervision can perform most of the work in concrete construction.

Speed of construction, when the ends attained are considered, is more rapid than is possible with any other building material.

Concrete structures are easily kept cool in summer and warm in winter.

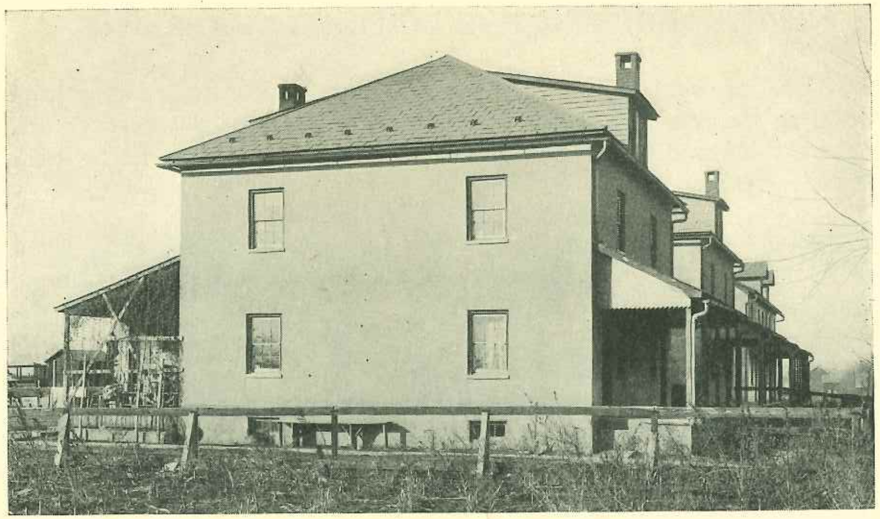
Concrete increases in strength with age.

With the all-concrete structure, first cost is the only one. Maintenance is eliminated.

Loss of the structure by fire is practically an impossibility, therefore insurance need not be carried on the building.

ARCHITECTURAL POSSIBILITIES

Concrete houses can be designed by competent architects so that the intending builder can gratify his taste for almost any admired type of architecture. Any interior arrangement desired is readily adapted to concrete design. Wood window frames, doors, and other interior trim may be used in the concrete house but metal trim and fireproof window frames, sash and doors are preferable. Wood floors may be laid on top of concrete floors or linoleum may be used in a similar manner. The concrete floor properly finished is perhaps best. Very pleasing surface finish can be secured. The floor will be sanitary, more serviceable than any other type, and suited to any use proposed for it. Simple treatment makes a concrete floor ideal for dancing.

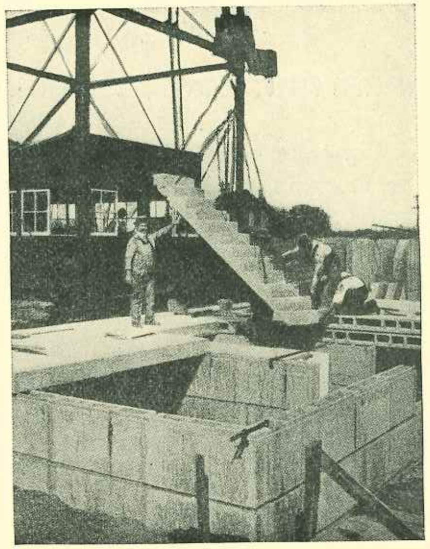


Monolithic concrete walls, erected with steel forms.

STAIRS, FLOORS AND ROOFS

The last possible measure of fire-safeness to the interior comes from concrete floors and all-concrete stairs. Treads, risers and balustrade can be of solid concrete, thus making the staircase fireproof—a very vital feature from the standpoint of safety to occupants.

Consistent use of concrete means a concrete roof. This can be flat or sloping as fancy or architecture may dictate.



Assembling pre-cast concrete units in a concrete house. The stairs are being placed.

TYPES OF CONSTRUCTION

Several distinct types or systems of construction have been developed for building concrete houses. Briefly these are as follows:

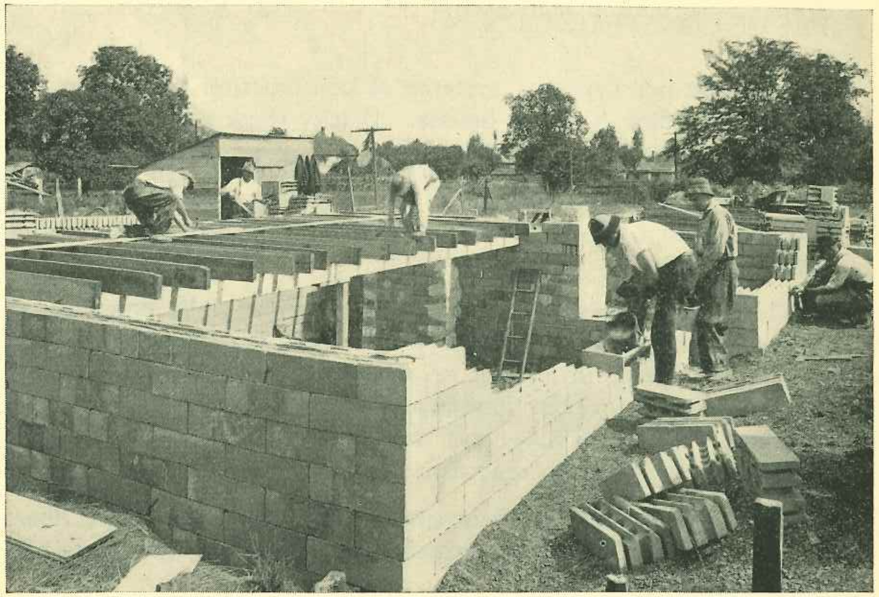
1. Walls, partitions, floors and roofs of monolithic concrete construction, reinforced where and as necessary. Such houses are built by depositing the concrete mixture into previously erected forms of wood or metal.

2. So-called unit systems, which mean that slabs constituting walls and partitions, also columns and beams, are manufactured or precast at a place or in a plant arranged for the purpose, and after the units have been properly hardened they are brought to the building site and set in place in a very short time and at small expense. Walls, partitions, floors and roofs may be solid or hollow.

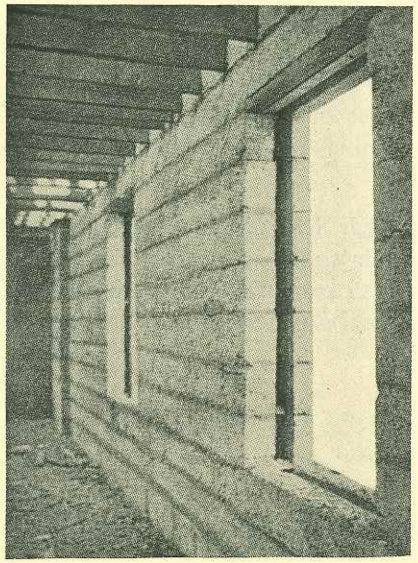
3. Walls of concrete block or similar units, with partitions, floors and roof as in the preceding system. Walls, partitions, floors and roofs may be solid or hollow.

4. A metal frame, resembling that used in a house built of wood, to which metal lath or fabric is fastened and the exterior covered with portland cement stucco. Metal lath is also attached to this frame on the interior, which is plastered with ordinary plaster. Partitions may be of metal frame and lath, like the exterior walls, or of hollow cement tile or other fireproof partition material. Floors and roofs may be solid slabs of reinforced concrete or may have metal joists, covered by thin reinforced concrete slabs. Metal lath is attached underneath the joists, then plastered.

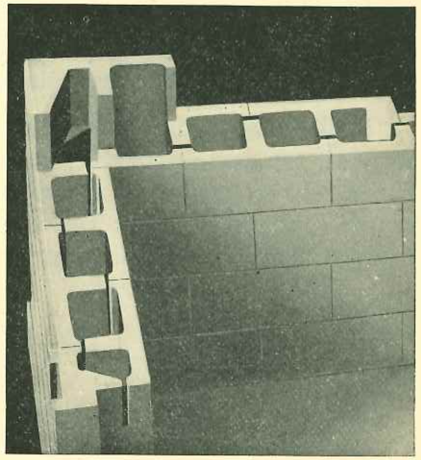
Hollow walls in concrete houses, regardless of how they may be secured, are quite desirable, since the air space so produced protects the interior of the house against sudden or extreme changes in outside temperature—contribute to keeping the house cool in summer and makes it easier to heat in winter.



Concrete tile walls. The center space is filled with concrete as the tile courses are laid, leaving an air space on both sides.

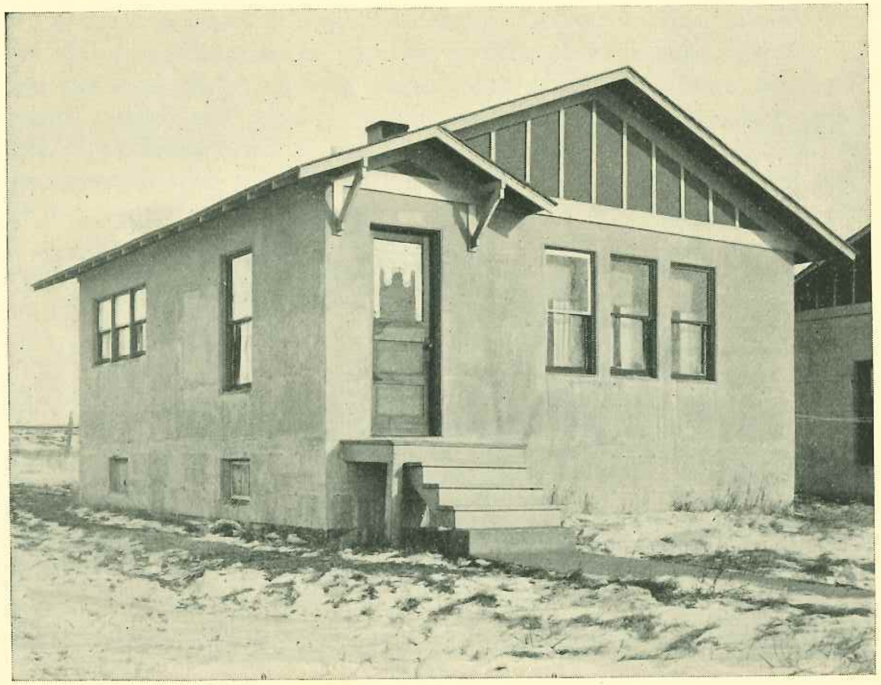


Double concrete wall, showing continuous air space.



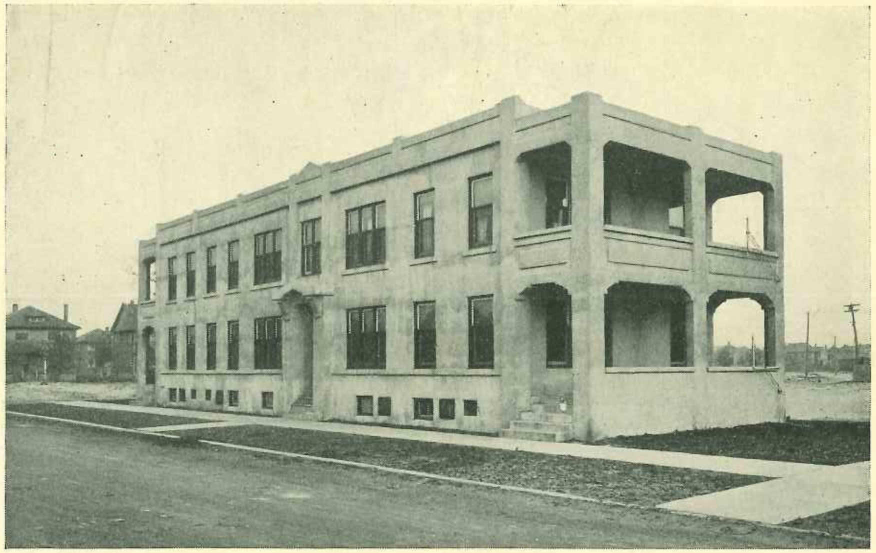
Concrete block wall, showing air space in both directions.

A real estate development in which concrete is used for every house.



One of the houses in the group shown above.

Three story terrace houses at Gary, Ind.



These concrete apartments at Gary, Ind., are complete, to the latest ideas in porches and sun rooms.

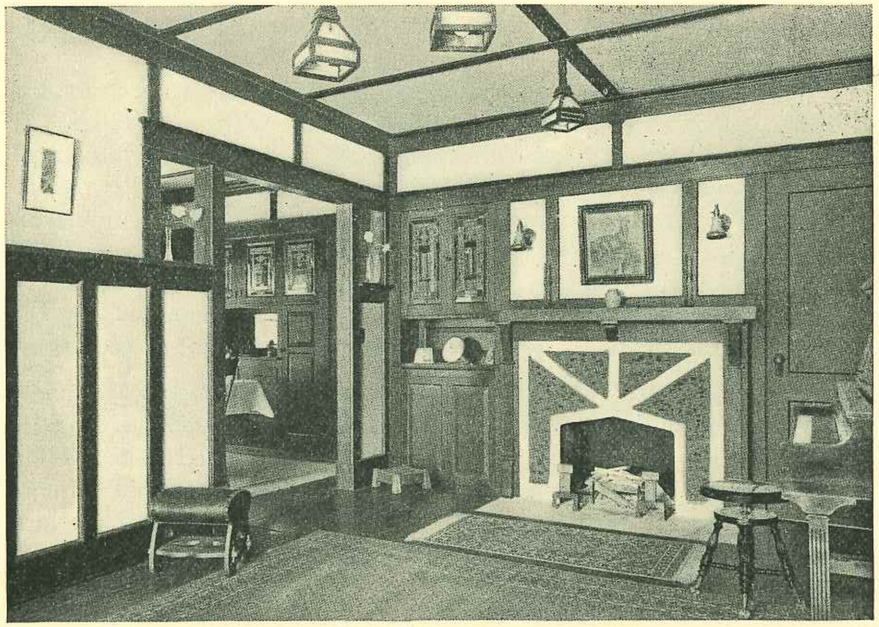
COMMUNITY DEVELOPMENT WITH CONCRETE

The general adoption of concrete construction raises the standard of living. Concrete houses fit in admirably with any landscape scheme. Good exterior appearance depends only upon architectural design and workmanship. Fireproof concrete houses help to reduce the cost of living. Insurance costs are lowered. Where industrial communities are developed with concrete improvements throughout, the neighborhood assumes a truly permanent aspect. Concrete streets and alleys insure easy access for fire departments. Concrete paving, front and back, makes utmost cleanliness of surroundings possible.

Cost of keeping concrete-improved communities clean is considerably lower than that required for the unpaved poorly-built district. Peace of mind is a valuable return secured from permanent, fireproof, concrete improvements. It cannot be reduced to dollars and cents but most certainly increases the earning capacity of individuals.

There is not an instance where industrial housing has been worked out with particular reference to the comforts of those most interested—the workers—that their self respect and general efficiency have not greatly improved. Today the inducement of high wages without attractive home surroundings will not foster contentment in the workingman with his position. No matter how dirty his work may be, he wants to keep himself and his home surroundings clean. He has learned to appreciate and value attractive, comfortable, modern, sanitary quarters. He, as well as his employers, realize that these are conducive not only to his personal efficiency but to his health and general welfare. The concrete house makes these ends attainable.

For the untrained, ignorant foreign laborer who has not learned the value of these things, the concrete house is still the solution. He is exceptionally difficult to provide for because by habit due to lack of proper environment he is likely to be uncleanly and destructive in the use of whatever home he may occupy. He cannot afford to pay much rent so the housing provided for him must consider a type of construction which is of low upkeep. He must be housed in a home that will provide for his general welfare as regards sanitary appointments and comfort, and also in one that will withstand the general abuse to which in his ignorance he may subject it.



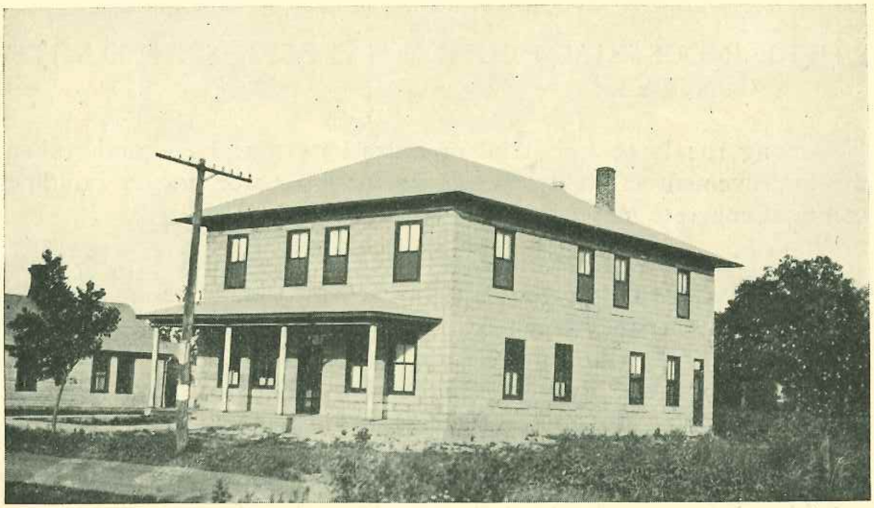
These views prove that the interior of the concrete house can be attractive and homelike.

WHERE INDUSTRIAL HOUSING HAS BEEN SOLVED WITH CONCRETE

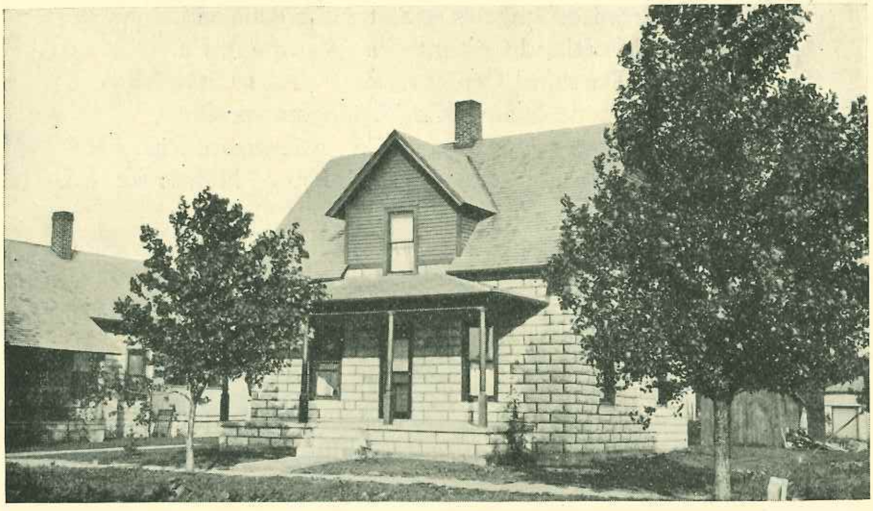
Among the large industrial organizations that have undertaken the improvement of living conditions for their workers by building homes of concrete may be mentioned the following:

American Sheet and Tin Plate Co., Gary, Ind.
The United States Portland Cement Co., Concrete, Colo.
Witherbee-Sherman Mining Co., Mineville, N. Y.
Lawrence Portland Cement Co., Siegfried, Pa.
Minnesota Steel Co., Morgan Park (Duluth), Minn.
Modern Homes Co., Youngstown, Ohio.
Delaware, Lackawanna & Western Railroad, Concrete City, Pa.
Oklahoma Portland Cement Co., Ada, Okla.
Case Estate, Racine, Wis.
The Sandusky Cement Co., Cleveland, Ohio.
Ludlow Manufacturing Associates, Ludlow, Mass.
Kosmos Portland Cement Co., Inc., Kosmosdale, Ky.
Pittsburgh Crucible Steel Co., Midland, Pa.
American Steel & Wire Co., Donora, Pa.
Union Portland Cement Co., Ogden, Utah.
San Pedro, Los Angeles & Salt Lake Railroad.
Crescent Portland Cement Co., Wampum, Pa.
Missouri Portland Cement Co., Kansas City, Mo.
Concrete Stone & Sand Co., Youngstown, Ohio.
Allentown Portland Cement Co., Allentown, Pa.
Delaware, Lackawanna & Western Ry., Nanticoke, Pa.
A. C. Dunham, Newington, Conn.
Eli Hull, Newark, O.
The Logan Coal Co., Harrison Building, Philadelphia, Pa.
The Traylor Shipbuilding Co., Cornwall, Pa.

The concrete house is the logical result of requirements to be met in the ideal home, whether for the man of small, moderate or considerable means. In each case it secures durability, fireproofness and sanitation at moderate cost with the minimum of upkeep expense. It measures up to every standard requirement.



Concrete block are used in the walls of this four-family apartment house.



Many cottages of this type indicate the favor in which owners and builders regard concrete block.